SM 20th Ed 3120 B
INDUCTIVELY COUPLE PLASMA (ICP) METHOD

Facility Name:_____VELAP ID_____

Assessor Name:_____ Analyst Name:_____ Inspection Date_____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst:_____ Sample ID: _____ Date of Sample Preparation:_____ Date of Analysis:_____					
Was instrument rinsed between sample uptakes to prevent carryover?	4 c				
After calibration, before sample analysis, and every ten samples, were check standards determined to be within ±5% (or within control limits, if tighter) of expected values?	4 c 4 e				
Was an instrument quality control sample (different from above) analyzed to be within ±5% (or within control limits, if tighter) of expected value with each run?	4 e				
Was a method quality control (different from above) subjected to the steps of sample preparation analyzed to be within ±5% (or within control limits, if tighter) of expected value with each run?	4 f				
Was a method blank analyzed with each sample run?	4 d				
Were samples that were beyond the calibration range diluted and reanalyzed?	4 d				
When new matrices were analyzed, were the matrices determined to have neither positive nor negative matrix interferences by serial dilution or post-digestion addition?	4 g				
Was matrix interference testing from serial dilutions demonstrated to have recoveries of ±5% of the original sample, and did matrix interference testing by post-digestion addition have recoveries between 95 and 105% or within ±2 standard deviations around the mean?	4 g				
Were sample results blank corrected from adjacent calibration blanks?	5 a				
Notes/Comments:					

SM 3120 B 20TH
INDUCTIVELY COUPLE PLASMA (ICP) METHOD **Page 2 of 3**

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Were spectral interferences corrected each time samples were analyzed unless conditions could be confirmed to be the same from day-to-day?	5 c				
Were sample containers cleaned with detergent, then tap water, soaked in and rinsed with acid, and rinsed with metal-free water prior to use?	3010 B 1				
Were samples for dissolved metals filtered prior to preserving to a pH < 2?	3010 B 2				
Were samples stored at approximately 4°C?	3010 B 2				
Were acid-preserved samples analyzed within 5 weeks for mercury? (Potassium permanganate preserved samples can be held longer.)	3010 B 2				
Were samples analyzed within 6 months for other metals?	3010 B 2				
Was chromic acid not used to clean sample containers when chrome was measured?	3010 B 2				
Were the LOQs/MDLs determined for each new analyst, when a hardware change was made, and when method operating conditions were modified?	3020 B 1 b				
Was the LDR range of the instrument determined over the range where responses were within 10% of the expected values?	3020 B 1 c				
Was a blank and a minimum of three calibration standards used in initial calibrations?	3020 B 2 a				
Were mid-point check standards analyzed before sample analysis, periodically during a run, and at the end of each run to be between 80 and 120% of expected values?	3020 B 2 b				
Were method blanks exposed to all elements of sample preparation and measured to be less than MDL?	3020 B 3 a				
Was an LFB included with each batch of 20 or fewer samples and determined to be within control limits?	3020 B 3 b				
Notes/Comments:					

SM 3120 B 20TH
INDUCTIVELY COUPLE PLASMA (ICP) METHOD **Page 3 of 3**

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Were duplicates analyzed with each set of 20 or fewer samples?	3020 B 3 c				
Were LFMs analyzed with each set of 20 or fewer samples and evaluated against control limits?	3020 B 3 d				
Were new or unfamiliar matrices analyzed by method of additions to demonstrate the absences of interferences when replicates had results within 10% of each other?	3020 B 3 e				
Were only samples having turbidities of NTU < 1 analyzed without pretreatment?	3030 A Introduction				
When dissolved metals were analyzed, did filter blanks demonstrate filter apparatus to be free from contamination?	3030 B 1				
When acid-extractable metals were analyzed, were samples acidified at collection, heated on a steam bath, and then filtered?	3030 C				
Nitric Acid Digestion for AA					
Were samples not allowed to dry during digestion?	3030 E 1 c				
Were watch glasses and beaker walls rinsed into final sample container with metal-free water upon sample transfer?	3030 E 1 c				
Nitric Acid Digestion for ICP and ICP-MS					
Were new polypropylene tubes and caps soaked at least overnight in 2N nitric acid?	3030 E 2 c				
Was nitric acid added to samples which where then digested at 105°C for 2 hours?	3030 E 2 c				
Were samples not allowed to boil while digesting?	3030 E 2 c				
Were samples stored after digestion at 4°C if not analyzed immediately?	3030 E 2 c				
This checklist does not contain all digestion procedures listed in SM 3030					
Notes/Comments:					